



ONONDAGA COUNTY FIRE CHIEFS ASSOCIATION
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TRANSMITTAL

TO: Mr. Chick Langone
Langone & Associates
Radio Consultant for Onondaga County

FROM: Chief Edward F. Wright, P.E.
Past President
OCICS Technical Committee Representative

SUBJECT: Functional Requirements for New Onondaga County Public Safety Two-Way Radio System

DATE: February 22, 2006

Attached please find an updated copy of the information this Association has previously submitted to the Onondaga County OCICS Committee. There have been some recent additions and revisions based on input from the Onondaga County Fire Coalition and our Radio Committee. We sincerely appreciate having this opportunity to provide our input, which has been developed over a period of years thanks to the dedication of various volunteer members of our Onondaga County Fire Chiefs Association Radio Committee.

We look forward to seeing your draft Functional Requirements Specification for review prior to proceeding with Final Design.

cc: Chief Dave Bloss, President, Onondaga County Fire Chiefs Association
Chief Dave Steinberg, 1st Vice President, Onondaga County Fire Chiefs Association
Chief John Williams, 2nd Vice President, Onondaga County Fire Chiefs Association
Chief Ed Visser, Past President/OCICS Steering Committee Representative, Onondaga County Fire Chiefs Association
Chief Dave Van Marter, Onondaga County Volunteer Firemen's Association
Kit Thompson, Onondaga County Fire Districts Association
Jeff Martin, Onondaga County Fire Police Association
Radio Committee Members, Onondaga County Fire Chiefs Association
Jim Albanese, County Executive's Office, Onondaga County
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ONONDAGA COUNTY FIRE CHIEFS ASSOCIATION

RADIO SYSTEM REQUIREMENTS

FEBRUARY 2006



Onondaga County Fire Chiefs Association Functional Requirements
Onondaga County Interoperable Communications System



Requirement #	Qualitative Requirement Description	Additional Information	Feature Included in Spec Section #	Feature Not Included in New System	Priority High (Must Have) Medium Low
	FEBRUARY 18, 2006: ITEMS 93.0 THRU 100.0 HAVE BEEN ADDED SINCE THE ORIGINAL LIST WAS TURNED OVER TO THE 911 CENTER AND THE DEPARTMENT OF EMERGENCY MANAGEMENT IN MARCH 2005. THESE NEW ITEMS WERE ADDED DURING A JOINT MEETING OF THE ONONDAGA COUNTY FIRE CHIEFS ASSOCIATION RADIO COMMITTEE AND THE ONONDAGA COUNTY FIRE COALITION HELD AT KIRKVILLE ON 2/18/2006.				
1.0	Ability to talk to 911 Center via portable radio or vehicle mounted radio from any location within Onondaga County. This would include from inside buildings and from basements (below grade). Specific existing problem areas need to be identified and addressed				Must Have
2.0	Ability to talk to any other unit on the fireground from either a portable radio or vehicle mounted radio.				Must Have
3.0	Ability to communicate with any other fire department's or EMS agency's radio if they are working at the same incident. This would include units from Oswego, Cayuga, Cortland, and Madison Counties. Must work if they come mutual aid to Onondaga County and if we go mutual aid to their county.				Must Have
4.0	Ability to utilize multiple channels/talk groups at an incident so groups of units can communicate with each other without interfering with other groups operating at the same incident but with different functional assignments.				Must Have
5.0	Ability to have multiple, simultaneous incidents within the County. All features specified in this document are required for each incident without interfering with any other incident. It is anticipated that up to 5 major incidents could occur simultaneously.				Must Have
6.0	Ability for all features to be available during times of natural disaster (flood, tornado, power outage, major snow/ice/wind storm, etc.) or terrorist event.				Medium
6.1		Ability to maintain an operational radio system is required, but it is understood that some features may not be available during a system failure.			Must Have

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6.2		Consider developing a partnership with other Counties to standardize on radio systems, and maintain a number of "drop-in" stand-alone emergency back-up radio systems that could be quickly deployed during a period of radio system outage. Store these systems at multiple locations throughout the State, increasing the odds that operational systems will be available to deploy from an area not affected by the outage event.			
7.0	Ability for radios to maintain all features when the radio is taken to any other part of Onondaga County (i.e. Tully FD radios must work in Baldwinsville, Cicero, Fayetteville, etc.).				Must Have
8.0	Ability to monitor all channels/talk groups at the 911 Center during an ongoing emergency.				Must Have
9.0	Capability to record all channels/talk groups for later playback at the 911 Center.				Must Have
10.0	Ability for EMS units to access MED 1 through MED 10 from portable and vehicle mounted radios.				Must Have
11.0	Ability for EMS units to access Statewide 155.340 MHz from portable and vehicle mounted radios. This may require an optional tone keypad on the radio.				Must Have
12.0	Ability for EMS units and Fire units to communicate with Rural Metro ambulances from portable and vehicle mounted radios.				Must Have
13.0	Ability for EMS units to communicate with hospital-based physician from patient's side inside any building.				Must Have
14.0	Ability for Fire Units to communicate with EMS units.				Must Have
15.0	Ability to communicate with units on Low Band Channels 1, 2, 3, 5, 6, 7, 8, and Fire Police Channel during the phase in/phase out period.				Must Have
16.0	For Departments who have their own Low Band Channel 4, ability to communicate with units on Low Band Channel 4 during the phase in/phase out period.				Must Have
17.0	Ability to operate controls of portable radio while in full SCBA gear and gloves in hazardous atmosphere.				Must Have

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18.0	We do not absolutely need the ability to talk long distances across the county to other departments (e.g. Fayetteville FD does not need to talk to anyone in Marcellus FD unless they are working at a common incident). It would be nice, though, to have a way to talk to other units from our own department wherever they are within the county.				Medium
19.0	All features must work even outside Onondaga County if the radio is within 5 miles of the fire station. For example, Brewerton FD radios should work if they travel to nearby West Monroe, which is outside Onondaga County. Also need capability of on scene communication with mutual aid agencies in any adjacent County (Cayuga, Cortland, Oswego, Madison).				Must Have
20.0	For the purposes of this report, include all of Oneida Lake, Cross Lake, Skaneateles Lake, and DeRuyter Reservoir as if they were in Onondaga County, due to frequent water rescue operations on these lakes.	Added DeRuyter Reservoir in this requirement			Must Have
20.1		It is recommended that the Technical Committee & RF Consultant review recordings and transcripts of a snowmobile accident search & rescue which occurred on Oneida Lake at approx. 2200 Hours on 3/4/2005. The incident involved Bridgeport FD, South Bay FD, Brewerton FD, Constantia FD, Onondaga County Sheriffs including Air One, NYS Police including 1H16 for a medevac, Onondaga County 911, Oswego County 911, Madison County 911, NAVAC, SOVAC, EM-314, Cicero PD, and others. The communications problems encountered on this incident should be analyzed, and corrected in the new system.			Must Have
21.0	The system must be fully functional even if the 911 Center is offline due to an unforeseen event.				Must Have

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Requirement #	Qualitative Requirement Description	Additional Information	Feature Included in Spec Section #	Feature Not Included in New System	Priority High (Must Have) Medium Low
22.0	Ability for Command officers to communicate with other agencies (e.g. local police, County Sheriffs Department, State Police, County Highway, local highway department, Red Cross, Syracuse Fire Department, Hancock Airport Crash Rescue, Medevac helicopters, local codes enforcement department, local school administrators, Penn Central Railroad, Amtrack Railroad, FEMA, National Guard, US Military, etc, etc.).				Must Have
23.0	Typical Fireground Channels Needed at a large incident:	Up to 6 Channels/Talk Groups per incident as follows:			Must Have
23.1		Operations Channel (main fireground operating channel)			Must Have
23.2		Command Channel (direct, clear channel to the 911 Center)			Must Have
23.3		RIT Channel (dedicated channel for the Rapid Intervention Team)			Must Have
23.4		1st Additional Sector Channel (e.g. Staging, Accountability, etc.)			Must Have
23.5		2nd Additional Sector Channel (e.g. Interior, Roof, etc.)			Must Have
23.6		3rd Additional Sector Channel (e.g. Water Supply, Ventilation, Fire Police, EMS, etc.)			Must Have
24.0	System coverage at least as good as better than current cellular telephone technology. Need 100% Mobile-to-911 Center coverage. Need 95% portable-to-911 Center coverage. Need 100% portable-to-portable and portable-to-mobile on scene coverage including rural, residential, urban, commercial, and sub-grade (basement) areas.	Some fire agencies currently cannot reach the 911 Center via mobile radio from some areas within their district. This is absolutely unacceptable and must be corrected with this new radio system.			Must Have
25.0	Unit I.D. numbers	ID Number to be displayed on receiving radio.			Must Have
26.0	Unit Emergency (Signal 50 button)	Easily accessible when wearing firefighting gloves in the dark.			Must Have
27.0	Ability for EMS units to send biomedical telemetry data over all supported MED channels				Must Have
28.0	2 additional EMS channels/talk groups for EMS tactical use.				Must Have
29.0	Ability to prioritize specific or major incidents if a Trunking system is utilized.				Must Have
30.0	Automatic Vehicle Locator (AVL) technology should be considered.				Medium

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31.0	Ability for certain radio units to have access to telephone system, similar to a cellular telephone.				Low
32.0	Ability to purchase hardware from multiple vendors to allow for making good purchasing decisions. APCO Standard 25 is addressing the inter-operability of multiple vendors.				Must Have
33.0	Integrate SCBA PASS Alarm into radio emergency button with Firefighter Name or ID displayed at console. Broadcast "Man Down" alert to Command.				Must Have
34.0	Integrate "out of air" SCBA alarm into radio emergency button with Firefighter Name or ID displayed at console				Must Have
35.0	Provide "live mike" or VOX intercom system among each engine company, rescue company, search team, etc. while they are operating on the fireground	This is needed to allow officers to maintain communications with each of their assigned crew members, without tying up the main fireground communications channels or talk groups. Hardware would be mounted in firefighters turnout gear, helmet, or air mask.			Must Have
36.0	Emergency Button (Item # 26.0 above) to have HIGHEST priority on trunked system.	It is unacceptable to get a busy channel "bonk". Other users must be immediately dropped to give the Emergency immediate communications access.			Must Have
36.1		Once Emergency button is activated, assign that radio a dedicated FCC licensed channel so there is no chance that another user will take over the link.			Medium
37.0	Portable radio designed to be operated by firefighters wearing SCBA, while crawling on floor in interior fire/smoke conditions				Must Have
38.0	Portable radio must be capable of operating flawlessly in humid, wet, hot, smoky interior fire conditions				Must Have
39.0	Portable radio must be capable of operating flawlessly in cold, icy, snowy conditions				Must Have
40.0	Display must be easily seen in all lighting conditions from full darkness to bright sunshine.				Must Have
41.0	Ability to disable LED's, backlights, etc. if necessary to conceal your position in the dark				Medium
42.0	Ability to transmit EVACUATE signal from Command to all radios on fireground.				Must Have
43.0	Ability for LZ Officer/unit to communicate with approaching helicopter				Must Have

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44.0	Install any needed antennas, etc. in large buildings (shopping malls, schools, office buildings, factories, etc.) so portable radios will operate inside buildings				Must Have
45.0	100% Portable Radio coverage at fireground 100% of the time.				Must Have
45.1		May require additional system hardware at fireground or in certain localities to boost reception capabilities.			Must Have
45.2		If the backbone infrastructure cannot provide this level of coverage, then a system must be designed that brings this capability to the incident scene on the first arriving vehicle, giving every mobile and portable full access to the Trunking system.			Must Have
46.0	100% Mobile Radio coverage 100% of the time from all outdoor geographic locations within the County	Some fire agencies currently cannot reach the 911 Center via mobile radio from some areas within their district. This is absolutely unacceptable and must be corrected with this new radio system.			Must Have
47.0	Ability for off duty volunteer firefighters to monitor radio traffic from their homes, automobiles, etc. without having to purchase an expensive 2-way trunked radio for each person				Must Have
48.0	Ability to alert Ladies Auxiliary for Signal 14 calls.	At present, a common problem is that the volunteer firefighter takes his pager with him on the call leaving the Auxiliary out of touch.			Must Have
49.0	Rockland County in Downstate New York currently has a Request For Proposal (#RFP-RC-04-040) for the procurement of a Public Safety 12.5 kHz UHF Digital Trunked Simulcast Radio System. They appear to be a few months ahead of us.	Strongly recommend that the Technical Committee meet with their counterparts from Rockland County to share information and hopefully learn from their similar recent experiences.			
50.0	Oswego County has been operating a Public Safety trunked radio system for a number of years	Strongly recommend that the Technical Committee meet with their counterpart user groups from Oswego County to share information and hopefully learn from their experiences			
50.1		What do they like?			
50.2		What would they like to change?			
50.3		How do they utilize their talk group assignments on different types of incidents?			
51.0	If GPS Timing is used to synchronize multiple transmitter sites, must have a fail-safe mode which maintains critical operation of the system in the event of GPS signal loss.	It is feasible that the GPS system could be temporarily disabled for reasons of national security.			Must Have

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52.0	Ability to automatically assign all units responding to an incident to a common talk group	This would allow all responders to share information directly rather than relaying through the dispatcher. It would also reinforce that police, fire, and EMS are all on the same team!			Must Have
53.0	Establish a radio system failure protocol so field units can easily and quickly reconfigure their radios to allow simplex operation if there is a total Trunking system failure				Must Have
54.0	The benefits of a Trunking system are acknowledged. However, we are concerned that during "THE BIG ONE" there will not be a sufficient number of FCC licensed frequencies or trunking computer throughput capacity to handle the short term high demand for air time.	Provide a detailed analysis of this scenario for the Technical Committee to review and understand.			Must Have
55.0	Incident Commander needs the capability to talk directly with local town/village highway department				Medium
56.0	Incident Commander needs the capability to talk directly with Onondaga County Highway Department				Medium
57.0	Need portable radio coverage inside shopping malls, school buildings, factory buildings, etc. This is especially important to EMS crews who often work alone.				Must Have
57.1		May need to install "Bi-Directional Amplifiers" in some existing buildings			
57.2		Need to update building codes to require "Bi-Directional Amplifiers" in new construction which meets certain criteria			
58.0	Fire Departments are expecting a one-for-one replacement of all base radios, mobile radios, and portable radios				Must Have
58.1		Failure to provide 100% 1-for-1 replacements at time of system start-up will significantly lengthen the transition period where both the "old" and "new" systems will need to be operational. Please remember back when County Fire Control issued a directive that all Fire Service radios would require a tone encoded squelch tone to be added to all transmitters. This implementation took many years due to the budget constraints of the various fire departments.			
58.2		If the transition period is long, the anticipated UHF frequencies will not be available to the new trunked system as they will still be needed by their current users until the transition is complete.			

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58.3		If the County is not planning to include replacement radios in their scope, at minimum the County needs to assist each and every fire department in securing appropriate funding grants at the same level of priority as the County's grants.			
59.0	Include the functional requirements of Fire Police operating at emergency incidents, field days, funeral details, training exercises, etc.	Need the Onondaga County Fire Police Association to provide details.			Must Have
60.0	Ability to incorporate units operating on the FCC-designated National Mutual Aid Channels to be incorporated into our system to allow them to work at an incident:				Must Have
60.1	VHF High Band	154.2800 MHZ 154.2650 MHz 154.2950 MHZ			
60.2	VHF Low Band	46.22 MHz			
60.3	UHF Band	453./458.2125 U-Call 453./458.4625 U-Tac 1 453./458.7125 U-Tac 2 453./458.8625 U-Tac 3			
60.4	800 MHz Band	821./866.0125 I-Call National Calling Channel 821./866.5125 I-Tac 1 National Working Channel 822./867.0125 I-Tac 2 National Working Channel 822./867.5125 I-Tac 3 National Working Channel 823./868.0125 I-Tac 4 National Working Channel (Sub-audible tone 156,7 Hz TX & Rx)			
60.5	Aviation - Multiple Medevac Operation	123.05 MHz			
60.6	Search & Rescue	155.160 MHz			
60.7	Other M/A channels as identified by the RF Consultant				
61.0	If new/additional transmitter/repeater sites are needed, consider utilizing existing fire station facilities throughout the County				
62.0	Ability for Mobile and Portable radios to initiate a private conversation to any other authorized radio on the system that no one else can monitor.				Medium
63.0	Ability for 911 Center to deactivate any radio on the system to prevent that radio from monitoring any conversations or transmitting on the system	This would be utilized if a radio is lost, a vehicle is stolen, etc.			Must Have

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63.1		If the deactivated radio attempts to transmit, the system should notify the dispatcher and provide the approximate location for immediate police investigation.			Must Have
64.0	Ability to temporarily assign groups of radios to a temporary talk group when working at a common incident of a special nature				Must Have
65.0	System should monitor the actual utilization and provide reports on any denied requests to transmit	This information is needed to justify adding additional frequencies to the trunked system, and more importantly, to allow the County to expand the system as the needs escalate.			Must Have
66.0	Ability for EMS units to contact out-of-County hospitals				Must Have
66.1		AA Lee in Fulton			Must Have
66.2		Oswego Hospital			Must Have
66.3		Rome Hospital			Must Have
66.4		Oneida Hospital			Must Have
66.5		Auburn Hospital			Must Have
67.0	Ability for EMS units to contact Onondaga County from out of county hospitals.	A concern is heading to a hospital in a nearby county and loosing radio coverage during transport. This could be very important if a patient goes down hill or an Ambulance is in an accident.			Must Have
68.0	Ability for EMS to contact Police in priority emergencies.	EMS is normally dispatched alone to calls.			Must Have
69.0	Ability for EMS to contact fire units.				Must Have
70.0	Availability of numerous EMS operational or tactical channels	More than 2 channels are needed, however Fire and EMS could possibly share them.			Must Have
71.0	Improved Mobile Data system to include mapping and hospital status.				Must Have
72.0	Availability for EMS to contact Oswego, Madison, Cayuga, and Oneida Counties 911 Centers	Madison EMS freq 155.280			Must Have
73.0	Availability for out of county EMS units to contact and work on an incident in Onondaga County	For example: NAVAC with SOVAC or Rural Metro Brewerton or North Shore (Oswego County); Manlius with CAVAC (Cazenovia-Madison County); etc.			Must Have
74.0	Availability for EMS unit to contact Airport Rescue on incidents at Hancock Airport.				Must Have
75.0	Ability for County Fire Units to communicate with Airport Rescues and City Fire at incidents at or near Hancock Airport.				Must Have
76.0	Ability for SAR (Search & Rescue) to communicate with Mutual Aid SAR teams on State wide MA – 155.160	Need this capability in Onondaga County and in surrounding counties			Must Have
77.0	Ability for SAR units to communicate with Fire and Police units on an incident				Must Have
78.0	Ability to contact NYS Forest Rangers from any SAR unit.				Must Have

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79.0	Ability to AVL SAR Vehicles				Must Have
80.0	Ability for SAR to communicate with Helicopters & other aircraft	Medevac & Search aircraft			Must Have
81.0	Ability for SAR to contact Onondaga 911 from mutual aid counties	WSAR does the majority of our mutual aid in Oswego County – Will we be able to contact 911 to request or cancel units.			Must Have
82.0	Ability for SAR Units to communicate on 155.160 MHz from the incident site – portables in the field may not be able to reach a tower on the other side of the county				Must Have
83.0	Ability to scan/monitor "System" traffic when in a conventional (non-trunked) mode on scene	If the new radio system requires that we switch to simplex mode for 100% onscene portable coverage, we must be able to maintain communications with responding units and the 911 Center.			Must Have
		When in Simplex Mode, the 911 Center must be capable of receiving Mayday calls from any radio operating at the scene.			
83.1		On Bush Electronics' GE/Ericsson 800 MHz trunked system, when radios are switched to simplex, radios cannot scan the trunked talk groups so there is no way to monitor or communicate with 911 Center or incoming emergency units			Must Correct this problem
83.2		On Oswego County's EF Johnson 800 MHz trunked system, when radios are switch to simplex, radios cannot scan the "fire ground" talk groups			Must Correct this problem
83.3		If the new radio system requires that we switch to simplex mode to communicate with out-of-County Mutual Aid Units, the 911 Center must be capable of receiving Mayday calls from any radio operating at the scene.			Must Have
84.0	Ability to communicate with US Coast Guard and Auxiliary boats on Oneida Lake				Must Have
85.0	Include the functional requirements of the Onondaga County Underwater Recovery Team operating at emergency incidents	Need to actively request their input and participation in spec development. Has EM Office done this?			Must Have

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86.0	Ability for members of the Technical Committee to participate in the testing, start-up, phase-in, and warranty period to help identify any problems encountered with the new system so they can be resolved quickly.	It is recommended that during the testing, start-up, phase-in, and warranty period, each member of the Technical Committee be issued a fully functional portable radio of the type their respective functional group will be utilizing on the new system. This requirement can be made part of the installation contract to require the vendor to provide this equipment.			Must Have
86.1		It is recommended that the Technical Committee continue to meet regularly during the testing, start-up, phase-in, and warranty period.			Must Have
87.0	Hold vendor accountable to provide a complete, fully operational system free of problems	Recent experience on the County Fire Service UHF Paging System was very poor. The system has poor coverage/audio in some locations. We have been told that this was a result of the County being required to accept the lowest bidder. This project must be specified in such a way that the vendor must perform.			Must Have
87.1		Some areas of the County experience very poor audio quality from the paging system making it very difficult to understand the dispatcher.			Must Have
87.2		In recent weeks, there have apparently been further adjustments made to the hang/dwell time at the conclusion of each radio transmission making the system much more choppy to a person monitoring the audio channel.			Must Have
88.0	Verify that selected radio frequencies are free of interference from other users on adjacent frequencies	The County Fire UHF Paging System, which operates on 453.850 MHz experiences severe adjacent channel interference in the downtown Syracuse area, especially near the Hospital district.			Must Have
89.0	Implement a system which assures proper audio level from all dispatchers even if they have a quite speaking voice	The current radio system is very dependent on the individual dispatcher properly adjusting his/her microphone and maintaining a consistent speaking level. Some dispatchers are extremely difficult to hear, especially some females.			Must Have
90.0	Modify the respective audio levels of voice vs. alerting tones	Current system has extremely loud alerting tones which is very distracting on the fireground and in the command post			Must Have

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91.0	Maintain functionality of Town of Cicero Emergency Operations Center	The Town of Cicero operates a multi-agency EOC on an as-needed basis from Cicero Fire Station #2. It is important to include Town of Cicero officials in the planning so they can maintain this facility's usefulness.			Must Have
92.0	Ability for Fire Chief / Incident Commander to be able to communicate with every unit for which he is responsible during an ongoing emergency	Non-negotiable requirement!			Must Have

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	<p style="color: red; font-weight: bold;"> <i>FEBRUARY 18, 2006: THE ITEMS THAT FOLLOW HAVE BEEN ADDED SINCE THE ORIGINAL LIST WAS TURNED OVER TO THE 911 CENTER AND THE DEPARTMENT OF EMERGENCY MANAGEMENT IN MARCH 2005. THESE NEW ITEMS WERE ADDED DURING A JOINT MEETING OF THE ONONDAGA COUNTY FIRE CHIEFS ASSOCIATION RADIO COMMITTEE AND THE ONONDAGA COUNTY FIRE COALITION HELD AT KIRKVILLE ON 2/18/2006.</i> </p>				
93.0	Agency-Specific Talk Groups	<p>Ability for every fire department to have at least one dedicated channel or talk group for their private use during non-emergency events (day-to-day business, training, fund raisers, field days, etc. Departments that have been using the Bush 800 MHz system have already become accustomed to having this ability. It keeps radio traffic off the countywide channels, and gives the department the ability to conduct their business more efficiently and privately. Some departments will also require a separate talk group for just their fire chiefs. We had assumed that this feature was automatically being included, however one of our member fire chiefs was apparently told by the OCICS Project Manager that he would have to call the 911 Center to request a special talk group for a limited period of time. This would not be acceptable. Including this feature will be especially important to the departments which have given up their UHF frequencies to accomodate the build out of this new radio system.</p>			Must Have

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94.0	Digital vs. Analog Explanation/Justification	<p>The County announced during the December 19, 2005 joint meeting of the Technical and Steering Committees that "The County has determined that a UHF digital trunked system is the direction that we are going to proceed in."</p> <p>1. What is the reasoning and justification for selecting a "digital" system instead of an "analog" system.</p> <p>2. Will the digital decision limit the number of potential equipment providers, increase equipment costs, or create any additional complexity as the system develops?</p> <p>3. The OCICS Technical Committee should brought up to speed on this issue.</p> <p>4. Will the use of digital radios further complicate Requirement No. 47.0, providing off-duty volunteer personnel a cost-effective way to monitor radio traffic?</p>			Must Have
95.0	Talk Groups	<p>We understand that the County developed a draft list of talk groups for review by the Technical and Steering Committees, but requested that this list not be distributed outside these committees. We understand that the County later stated due to the lack of input, it was assumed that this talk group list would be acceptable. NOT TRUE!!!. The Onondaga County Fire Chiefs Association requests that the draft list be released so we can review it to determine if it meets our present and anticipated future needs.</p>			Must Have

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96.0	Ability to transmit 12-lead EKG's to hospital	Requirement Nos. 10.0 and 27.0 were intended to provide EKG telemetry access via the new radio system. It has recently been brought to our attention that as EMS units move away from the old 3-lead EKG's to the more data-intensive 12-lead EKG's, a more complex technological solution will be needed to permit this function. We have heard that systems operating in the UHF band may not be able to handle these data requirements. A solution is required.			Must Have
97.0	Continued Operation of the 453.850 MHz Fire Agency Paging System	Many fire departments have been investing in Motorola Minitor pagers able to alert fire fighters via the countywide UHF paging system. We have noticed that the two frequencies needed to operate this paging system (453.850 and 458.850 MHz) appear on the County's new radio license for a UHF trunked public safety radio system (WQDY448). We need assurance that the County will not be abandoning this paging system.			Must Have
98.0	Alphanumeric Text Paging of Portable Radios	The portable radios should have an optional alphanumeric display screen which will allow the user to receive text messages from the 911 Center.			Must Have
99.0	Alphanumeric Text Paging via Cell Phone, Blackberry, Palm Pilot, etc.	The alphanumeric text paging system presently in use by the Onondaga County 911 Center has become obsolete. In general use, pagers have been replaced by text-capable cell phones, Blackberries, Pam Pilots, etc. The new radio system should include an updated alphanumeric paging system that will direct emergency text pages to the above devices. The new system should be "generic" in design, allowing the use multiple, commercially available services (such as Verizon, Nextel, Sprint, Cingular, etc.)			Must Have

Onondaga County Fire Chiefs Association Functional Requirements
Onondaga County Interoperable Communications System



Requirement #	Qualitative Requirement Description	Additional Information	Feature Included in Spec Section #	Feature Not Included in New System	Priority High (Must Have) Medium Low
99.1		It is recognized that the maintenance of the database for each agency's text paging participants could become time consuming. It would be acceptable to require each agency to maintain their own list of users. However, a user-friendly method of maintenance should be provided (such as a secure web site).			
100.0	Tone-Alerting of Portable Radio	The portable radios should have an optional feature that allows radio to be placed in an "Alert" mode, silencing the speaker, until activated by sequential tones sent from the 911 Center. These tones should be the same tones that alert individual fire service pagers as part of the standard dispatch protocol.			Must Have
101.0					
102.0					
103.0					
104.0					



ONONDAGA COUNTY FIRE CHIEFS ASSOCIATION

2005 GAP ANALYSIS

OF CONCEPTS TO OPERATIONS FINAL REPORT

DATED MARCH 2, 2001

As requested by the Onondaga County Interoperable Communications System Project Manager, we have attempted to identify gaps in the March 2001 radio system consultant's report form Concepts To Operations. This is an ongoing work-in-progress, so updated information will be supplied as it becomes available. We need to give this topic sufficient time as there are nearly 60 different organizations we are polling to obtain this data.

1. We are reviewing a copy of CTO's Final Report dated March 2, 2001 which we received back at the conclusion of the CTO project. It is different than the preliminary copy the County distributed to all OCICS Technical Committee members which was dated January 9, 2001. Our copy seems to have more detail than the January 9, 2001 copy. We would suggest that all Technical Committee members be given the actual "final" CTO report rather than the earlier draft they have.
2. County presenters keep referring to the CTO report as the "800 MHz" report. True, it did recommend a 15-channel 800 MHz Simulcast Digital Trunked Radio System. But the report also goes into significant detail on other frequency bands including VHF and UHF. There is a section which lists the pros and cons of each band. Suggest we refer to it as "The CTO Report".
3. It appears that Onondaga County government is leaning toward the use of the UHF Band. The biggest "cons" detailed in the CTO report associated with selecting the UHF band are:
 - a. Fewer frequencies available
 - b. Poorer building penetration than 800 MHz
 - c. More severe output power restrictions
 - d. Potential FCC restrictions due to proximity of other licensees in Rochester NY (and Canada)
 - e. Apparently vacant channels actually being encumbered by other existing users on the older 25 kHz UHF channels
 - f. The CTO report calls UHF the "compromise band." If UHF is the ultimate direction taken in Onondaga County, we should make sure that all the "cons" are addressed to be sure the system works as intended. Do not rule out 800 MHz or a hybrid system yet.
4. There have been a significant number of Fire Service radio system infrastructure revisions since the CTO report was written. A few of them are:
 - a. Implementation of a countywide UHF paging system on 453.850 MHz. This was a major expansion of the Cicero Fire Department's paging system, detailed on Page 67 of the CTO report.



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- b. The Eastern Section's implementation of numerous UHF frequencies for fireground operation. They utilize portable radios, mobile radios, repeaters, and crossband repeaters.
 - c. The expansion of the Bush Electronics' 800 MHz trunked system to include an additional tower site in Baldwinsville.
 - d. Additional fire departments choosing to utilize the Bush Electronics' 800 MHz trunked system at their own cost.
 - e. Additional fire departments have implemented fire ground communications on either VHF-High or UHF radios
 - f. County's purchase of an ACU-1000 crossband repeater system and dispatcher emergency response vehicle (not yet in service)
5. During the Concepts To Operations, Inc. user group interviews, they focused mainly on finding out how many radios and pagers each department had in service. Very little, if any, time was spent on identifying communications shortfalls, and features desired/needed in a new radio system. It is very important that we determine the tactical needs of the fire service before we proceed with the design or implementation of a new system. This analysis should be in a plain English, functional specification format. For example, we should clearly define the needs based on different types of fire department incidents, such as:
- a. House fire
 - b. House fire with tanker operation
 - c. Barn fire with tanker operation involving injured animals
 - d. Automobile fire
 - e. Automobile accident with injuries
 - i. Rural
 - ii. Suburban
 - iii. On Interstate highway
 - f. Water rescue operation
 - g. Water rescue operation with out-of-county mutual aid
 - i. On Skaneateles Lake
 - ii. On Cross Lake
 - iii. On Oneida Lake



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- iv. On DeRuyter Reservoir
- h. Out-of County house fire, for example:
 - i. Brewerton FD mutual aid to West Monroe in Oswego County
 - ii. Delphi Falls FD mutual aid to Cazanovia in Madison County
 - iii. Spafford FD mutual aid to Homer in Cortland County but also involving units from Locke and Sempronius from Cayuga County
- i. in-County house fire with Mutual Aid, for example:
 - i. Skaneateles FD with mutual aid from Ira and Weedsport from Cayuga County
 - ii. Clay FD with mutual aid from Pennellville from Oswego County
 - iii. Large scale fire incident with mutual aid from more-distant fire departments (i.e. not from an immediately adjacent County).
- 6. Each of the volunteer fire departments in Onondaga County is being asked to review the information in the CTO report pertaining to their organization and provide an update. The information received back from these organizations is included as Appendix A.
- 7. Table 2-7 lists the number of Base Units, MST/MCT/MDT's, Pagers, Mobiles, and Portables in use by each agency. This table should be revised to clarify:
 - a. Pagers
 - i. How many are Low Band?
 - ii. How many are UHF?
 - iii. How many are AlphaNumeric?
 - b. Base Units, Mobiles and Portables - detail how many of each type radio are from each frequency band (Low Band, VHF High Band; UHF; 800 MHz)
- 8. The report does not address the needs of Fire Police operating at emergency scenes, training events, funeral details, field days, etc. Their needs must be included.
- 9. The report does not address the needs of the Onondaga County Underwater Recovery Team operating at emergency scenes. Their needs must be included.
- 10. A number of the fire department based ambulances have formed separate ambulance companies since the CTO report was written. These new organizations should each be surveyed to determine their needs, issues, problems, etc.
- 11. The report does not address the impact on day-to-day dispatch operations. Will the new system be completely transparent, or will there need to be significant



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operational and procedural changes made?



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APPENDIX

A

**Copies of updated information returned
by each Fire Department**



ONONDAGA COUNTY FIRE CHIEFS ASSOCIATION
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DATED MARCH 2, 2001

AGENCY NAME	REVISED INFORMATION INCLUDED?
Amber FD	
Apulia FD	
Baldwinsville FD	Yes
Belgium-Cold Springs FD	Yes
Borodino FD	
Brewerton FD	Yes
Bridgeport FD	
Camillus FD	
Caughdenoy FD	Yes
Cicero FD	
Clay FD	
Cody FD	
Delphi Falls FD	Yes
DeWitt FD	Yes
East Syracuse FD	
Elbridge FD	
Fabius FD	Yes
Fairmount FD	
Fayetteville FD	Yes
Hinsdale FD	
Howlett Hill FD	
Jamesville FD	
Jordan FD	



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AGENCY NAME	REVISED INFORMATION INCLUDED?
Kirkville FD	
LaFayette FD	Yes
Lakeside FD	Yes
Liverpool FD	
Lyncourt FD	
Lysander FD	
Manlius FD	
Marcellus FD	
Mattydale FD	
Memphis FD	
Minoa FD	Yes
Mottville FD	
Moyers Corners FD	
NAVAC Ambulance / Wilderness Search & Rescue	Yes
Navarino FD	
Nedrow FD	Yes
North Chittenango FD	
North Syracuse FD	Yes
Onondaga Hill FD	Yes
Onondaga Nation FD	
Otisco FD	
Phoenix FD	Yes



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AGENCY NAME	REVISED INFORMATION INCLUDED?
Plainville FD	
Pompey Hill FD	Yes
Seneca River FD	
Sentinel Heights FD	
Skaneateles FD	
Solvay FD	Yes
South Bay FD	
South Onondaga FD	Yes
Southwood FD	Yes
Spafford FD	
Taunton FD	Yes
Tully FD	
Warners FD	

Ed Wright

From: Ed Wright
Sent: Sunday, January 30, 2005 10:45 PM
To: Jim Albanese
Cc: John Williams; David Steinberg; Charles Gabriel; Steve Wisely; Ed Visser; David Bloss
Subject: Feedback on January 20th Meeting on New Interoperable Radio System

I was holding off on providing the requested feedback until after I had a chance to review the minutes of the first meeting. But I have not yet received the minutes. Rather than wait any longer, here are my comments....

It was very nice to see such an aggressive timeline proposed by your Project Manager. I want to repeat the words of caution I offered at the January 20th meeting. The Fire Service has been begging for a new radio system for over 10 years. We in no way want to delay the project. However, we need to include adequate upfront planning time to be assured that our needs are adequately identified for inclusion into the design phase. I was told at the meeting that it was not my responsibility to obtain this data from the County Fire Chiefs Association, nor to make sure we have buy-in from that group. Subsequently, I met with the Board of Directors of the Onondaga County Fire Chiefs Association. They have asked me, as their representative on your technical committee, to do just that. They are reactivating their Radio Committee and plan to hold the next committee meeting on February 23rd. Your committee will have met three times prior to that. It was implied at the January 20th meeting that all our feedback needed to be turned in at the next meeting on February 3rd. However, the undated project timeline which was handed out at the meeting shows the Requirements Analysis phase continuing until May 2005. That is more doable. It would be a big help if the radio engineering firm you plan to hire would include some additional time at the beginning of their work to revisit the Requirements Analysis phase to improve on it using their project scope definition skills.

I spent some time re-reading the Concepts To Operations, Inc. report. I have a copy of the Final Report dated March 2, 2001 which I am using. It is different than the preliminary copy you distributed to all meeting participants which was dated January 9, 2001. My newer copy seems to have more detail than the copy you distributed at the meeting. I'd suggest that you give everyone the actual "final" CTO report rather than the earlier draft they have.

Presenters kept referring to the CTO report as the "800 MHz" report. True, it did recommend a 15-channel 800 MHz Simulcast Digital Trunked Radio System. But the report also goes into significant detail on other frequency bands including VHF and UHF. There is a section which lists the pros and cons of each band.

It appears that Onondaga County government has since decided to use UHF. The biggest "cons" in the CTO report for selecting the UHF band are: Fewer frequencies available; Poorer building penetration than 800 MHz; More severe output power restrictions; Potential FCC restrictions due to proximity of other licensees in Rochester NY; Apparently vacant channels actually being encumbered by other existing users on the old 25 kHz UHF channels. The CTO report calls UHF the "compromise band." If UHF is the ultimate direction we take, we should make sure that all the "cons" are addressed to be sure the system works as intended. I would not rule out 800 MHz or a hybrid system yet.

There have been a significant number of Fire Service radio system infrastructure revisions since the CTO report was written. A few of them are:

- Implementation of a countywide UHF paging system on 453.850 MHz. This was a major expansion of the Cicero Fire Department's paging system, detailed on Page 67 of the CTO report.
- The Eastern Section's implementation of numerous UHF frequencies for fireground operation.
- The expansion of the Bush Electronics' 800 MHz trunked system to include an additional tower site in Baldwinsville.
- Additional fire departments choosing to utilize the Bush Electronics' 800 MHz system at their own cost.
- Additional fire departments have implemented fire ground communications on either VHF-High or UHF radios

- County's purchase of an ACU-1000 crossband repeater system

During the Concepts To Operations, Inc. user group interviews, they focused mainly on finding out how many radios and pagers each department had in service. Very little, if any, time was spent on identifying communications shortfalls, and features desired/needed in a new radio system. It is very important that we determine the tactical needs of the fire service before we proceed with the design or implementation of a new system. This analysis should be in a plain English, functional specification format. For example, we should clearly define the needs based on different types of fire department incidents, such as: house fire; house fire with tanker operation; barn fire; automobile fire; automobile accident with injuries (rural / suburban / on Interstate); water rescue operation; water rescue operation with out-of-county mutual aid (Skaneateles Lake; Cross Lake; Oneida Lake; etc.); out-of County house fire (e.g. Brewerton FD M/A to West Monroe); in-County house fire with Mutual Aid (e.g. Skaneateles FD with M/A from Ira, Weedsport, etc.); large scale fire incident with M/A from more-distant fire departments (i.e. not from an immediately adjacent County).

I have attached a Functional Requirement that was initially prepared in 1998 by the Onondaga County Voice Communication & Alerting Advisory Committee For Fire & EMS, then later updated in 2004 by Onondaga County Fire Chiefs Association Radio Committee. It needs more work, but it is a good starting point in defining the needs of the Onondaga County Fire Service.

Please note that the Onondaga County Fire Chiefs Association has had a change in leadership. President Ed Visser's term limit was up at the end of 2004, so he has stepped down. He remains a member of the Board of Directors as the immediate Past President (replacing me). The new officers for 2005 are: David Bloss - President (from Kirkville FD); David Steinberg - 1st Vice President (from DeWitt FD); John Williams - 2nd Vice President (from Fairmont FD). I have copied each of them on this email so you will have their email addresses.

Fire mutual aid interoperability will need to connect to the following existing nearby Fire radio systems:

Cayuga County - conventional Low Band system
 Cortland County - conventional Low Band system
 Oswego County EF - Johnson 800 MHz trunked system
 Madison County - conventional Low Band system
 Oneida County - multi channel VHF High Band system with some repeaters
 Nationwide 800 MHz mutual aid channels
 Nationwide UHF mutual aid channels
 Future changes to neighboring counties' systems must be incorporated as they occur

We talked briefly at the meeting about whether there are other localities that have already implemented a system like the one we need in Onondaga County. I would strongly suggest that we try to locate some locations, and visit them, to see what they have, how well it works, problems they have encountered, ideas/technology that we may not be familiar with that would help us, etc. This makes a lot more sense than starting from scratch. Oswego County is one place the technical committee should definitely visit since they have been using an interoperable (somewhat) trunked radio system for a few years now.

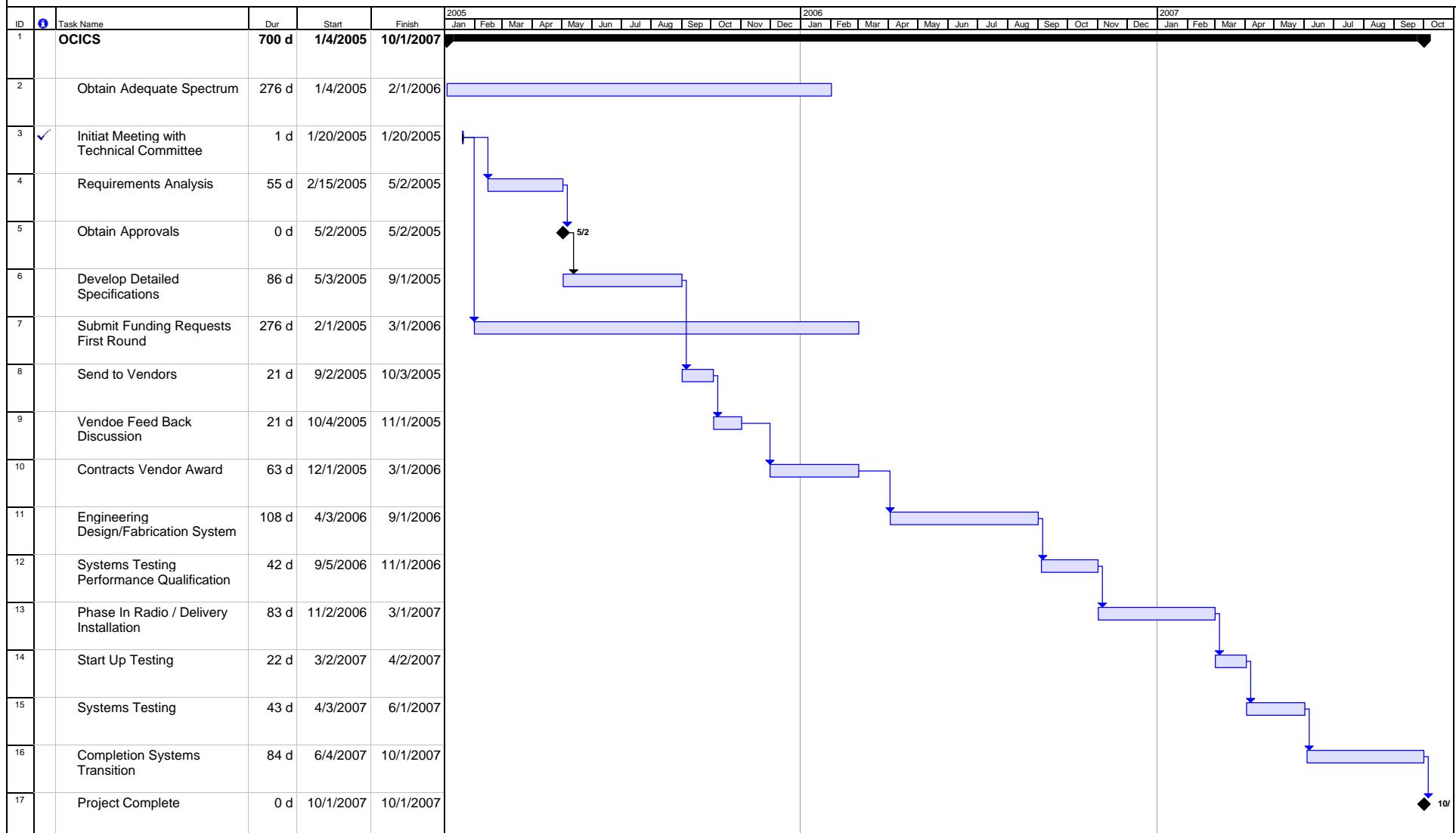
On the schedule - This project will be of significant complexity. It would really help if the County used a professional Project Scheduler to incorporate all our tasks (as they are developed) into a CPM (Critical Path Schedule). Periodic progress updates would then be needed to keep the project on track. The County has used local scheduling consultants in the past on other large projects. I can pass along some consultants names if you want. For reference, I converted the tabular schedule data which was passed out on 1/20 into a simple Gantt chart. This is a graphical representation of the schedule data to make it easier to visualize. No changes were made to the dates.

Ed Wright
 Onondaga County Fire Chiefs Association

**Edward F. Wright, Jr., P.E.
 P.O. Box 1712, Cicero, New York 13039**

Onondaga County, New York
Onondaga County Interoperable Communications System (OCICS)
High Level Projected Time Line
Tracking Gantt Chart

Data Source: Undated handout from 1/20/2005 Meeting



**The Onondaga County
Fire Chiefs
Association, Inc.**

**Functional Requirements of Proposed Voice Communication System
For Onondaga County Fire & EMS:**

- i Initially Prepared in 1998 by the Onondaga County Voice Communication & Alerting Advisory Committee For Fire & EMS.*
- i Updated in 2004 by Onondaga County Fire Chiefs Association Radio Committee.*

DESIRED FEATURES:

1. Ability to talk to 911 Center via portable radio or vehicle mounted radio from any location within Onondaga County. This would include from inside buildings and from basements (below grade). Specific existing problem areas need to be identified and addressed.
2. Ability to talk to any other unit on the fireground from either a portable radio or vehicle mounted radio.
3. Ability to communicate with any other fire department's or EMS agency's radio if they are working at the same incident. This would include units from Oswego, Cayuga, Cortland, and Madison Counties. Must work if they come mutual aid to Onondaga County and if we go mutual aid to their county.
4. Ability to utilize multiple channels at an incident so groups of units can communicate with each other without interfering with other groups operating at the same incident but with different functional assignments.
5. Ability to have multiple, simultaneous incidents within the County. All features specified in this document are required for each incident without interfering with any other incident. It is anticipated that up to 5 major incidents could occur simultaneously.
6. Ability for all features to be available during times of natural disaster (flood, tornado, power outage, major snow/ice storm, etc.).
7. Ability for radios to maintain all features when the radio is taken to any other part of Onondaga County (i.e. Tully FD radios must work in Baldwinsville, Cicero, Fayetteville, etc.).
8. Ability to monitor all channels at the 911 Center during an ongoing emergency.
9. Capability to record all channels for later playback at the 911 Center.
10. Ability for EMS units to access MED 1 through MED 10 from portable and vehicle mounted radios.
11. Ability for EMS units to access Statewide 155.340 MHz from portable and vehicle

**The Onondaga County
Fire Chiefs
Association, Inc.**

**Functional Requirements of Proposed Voice Communication System
For Onondaga County Fire & EMS:**

- mounted radios. This may require an optional tone keypad on the radio.
- 12. Ability for EMS units and Fire units to communicate with Rural Metro ambulances from portable and vehicle mounted radios.
 - 13. Ability for EMS units to communicate with hospital-based physician from patient's side inside any building.
 - 14. Ability for Fire Units to communicate with EMS units.
 - 15. Ability to communicate with units on Low Band Channels 1, 2, 3, 5, 6, 7, 8, and Fire Police Channel during the phase in/phase out period.
 - 16. For Departments who have their own Low Band Channel 4, ability to communicate with units on Low Band Channel 4 during the phase in/phase out period.
 - 17. Ability to operate controls of portable radio while in full SCBA gear and gloves in hazardous atmosphere.
 - 18. We do not absolutely need the ability to talk long distances across the county to other departments (e.g. Fayetteville FD does not need to talk to anyone in Marcellus FD unless they are working at a common incident). It would be nice, though, to have a way to talk to other units from our own department wherever they are within the county.
 - 19. All features must work even outside Onondaga County if the radio is within 5 miles of the fire station. For example, Brewerton FD radios should work if they travel to nearby West Monroe, which is outside Onondaga County. Also need capability of on scene communication with mutual aid agencies in any adjacent County (Cayuga, Cortland, Oswego, Madison).
 - 20. For the purposes of this report, include all of Oneida Lake, Cross Lake and Skaneateles Lake as if they were in Onondaga County, due to frequent water rescue operations on these lakes.
 - 21. The system must be fully functional even if the 911 Center is offline due to an unforeseen event.
 - 22. Ability for Command officers to communicate with other agencies (e.g. local police, County Sheriffs Department, State Police, County Highway, local highway department, Red Cross, Syracuse Fire Department, Hancock Airport Crash Rescue, Medevac helicopters, local codes enforcement department, local school administrators, Penn Central Railroad, Amtrack Railroad, FEMA, National Guard, US Military, etc, etc.).

**The Onondaga County
Fire Chiefs
Association, Inc.**

**Functional Requirements of Proposed Voice Communication System
For Onondaga County Fire & EMS:**

23. Typical Fireground Channels Needed at a large incident:
 1. Operations Channel (main fireground operating channel)
 2. Command Channel (direct, clear channel to the 911 Center)
 3. RIT Channel (dedicated channel for the Rapid Intervention Team)
 4. 1st Additional Sector Channel (e.g. Staging, Accountability, etc.)
 5. 2nd Additional Sector Channel (e.g. Interior, Roof, etc.)
 6. 3rd Additional Sector Channel (e.g. Water Supply, Ventilation, Fire Police, EMS, etc.)
24. System coverage ~~at least as good as~~ better than current cellular telephone technology. Need 95% portable-to-911 Center coverage. Need 100% portable-to-portable and portable-to-mobile on scene coverage including rural, residential, urban, commercial, and sub-grade (basement) areas.
25. Unit I.D. numbers
26. Unit Emergency (Signal 50 button)
27. Ability for EMS units to send biomedical telemetry data over all supported MED channels
28. 2 additional EMS channels for EMS tactical use.
29. Ability to prioritize specific or major incidents if a trunking system is utilized.
30. Automatic Vehicle Locator (AVL) technology should be considered.
31. Ability for certain radio units to have access to telephone system, similar to a cellular telephone.
32. Ability to purchase hardware from multiple vendors to allow for making good purchasing decisions. APCO Standard 25 is addressing the inter-operability of multiple vendors.

ONON. COUNTY

south

*RCVD 11/16/2005
FROM HAROLD SMITH*

EW.

GOAL: Coordination of communications utilizing the 3 radio systems presently used at emergency scenes involving mutual aid companies.

Present systems used in the Southern section:

Onondaga county low-band

- Ch. 1 (46.14) Dispatch
- Ch. 2 (46.22) Statewide fireground frequency
- Ch. 3 () Fireground
- Ch. 5 (46.06) Command
- Ch. 6 (46.46) Base to mobile
- Ch. 7 (45.96) Ambulance
- Ch. 8 () Ambulance
- Ch. 9 (46.28) Firepolice

Onondaga county 450 MHz:

- TAC 1 (465.6125)
- TAC 2 (460.5875)
- TAC 3 (465.5875)
- TAC 4 (460.6125)

Madison county 450 MHz:

- TAC 1 (465.5750)
- TAC 2 (460.5750)
- TAC 3 (460.6000)
- TAC 4 (465.6000)

Bush electronics 800 MHz: Talk groups set up per individual depts.

This guideline is meant to assist the I.C. in choosing communications to mitigate the emergency scene, keeping emergency worker safety a top priority. This is only a suggested guideline.

- 1) No department will utilize a cross band repeater on mutual aid calls unless requested by the I.C.
- 2) Any time a cross band repeater is used the I.C. will have a radio capable of the frequency delivered to the command post. This radio will be used as a check system to assure the proper operation of the cross band repeater, and assure communication with all involved at the scene.
- 3) Upon arrival on the scene the I.C. should request a channel for operations and command be secured from fire control.
- 4) When out of county departments are involved in operations (other than water supply), they should be given a radio that will allow them to communicate with the appropriate officer in the ICS structure.

When 450 MHz radios are used we should use Onondaga TAC channels whenever possible.

It is suggested that companies using 450 MHz radios should install the 4 Onondaga county TAC channels in channels 1 thru 4. If possible the departments using Madison county mutual aid should include Madison TAC 2 and 3 in the 450 MHz radios.

On scene radio use suggestions:

- 1) Channel 1 low band: Dispatch
- 2) Channel 2 low band: Reserve for tanker operations
- 3) Channel 3 low band: Operations, this should cross band to
TAC 1 or TAC 2 (450 MHz)
- 4) Channel 5 low band: Command to Fire Control
- 5) Channel 6 low band: Alternate operations channel, cross band to
TAC 1 or TAC 2 (450 MHz) also compatible to 800mhz
- 6) TAC 3 (450 MHz): Fireground operations to sector, ex: roof operation,
ventilation operation, etc.
- 7) TAC 4 (450 MHz): Additional fireground operations,
ex: special ops., EMS, RIT, etc.

Ed Wright

From: Ed Wright
Sent: Wednesday, September 14, 2005 5:34 PM
To: Joe Rinefierd; Charles Gabriel
Cc: Steve Wisely; Bill Bleyle; David Bloss; Jim Albanese; Peter P. Alberti; Dave Johnson; Mark Zoanetti
Subject: Comments on OCICS Draft Talk Group Plan

Joe & Charlie,

I will be unable to attend this Thursday's OCICS Technical Committee Meeting as I am working out of town temporarily in Potsdam, NY. I will attempt to secure an appropriate replacement to represent the Onondaga County Fire Chiefs Association at the 9/15/2005 meeting.

I spent a considerable amount of time looking over the draft Talk Group Plan that was distributed at our last meeting. They obviously put a great deal of effort and thought into this draft. It is a very good first pass. The prepares should be commended for a job well done.

If I understood the presentation correctly, the talk group plan was created by being very conscious of talk paths into the 911 Center. It was stated that the 911 Center does not plan to add staff to support the new radio system, so the number of talk paths was of primary concern. I do not believe that we can afford to limit our thinking on such an important upgrade to the Fire Service Communications System by assuming that no additional Fire dispatcher positions or consoles can be considered. While this may be an appropriate assumption for the day-to-day operation of the 911 Center, it should not be allowed to limit the capabilities of the new system. We need to learn from significant events like 9/11 and Hurricane Katrina and design our total system accordingly. This may require that the 911 Center develop a staffing plan to support the new system. That would not necessarily require adding new people on a permanent basis. But the 911 Center must be capable of expanding its capabilities as the situational need arises. This could mean an emergency recall of off-duty personnel at times of critical need, or possibly redesigning the Fire Box Alarm System to dispatch appropriately trained fire service personnel to man dispatch consoles to support large incidents. To limit the inherent capabilities of the new radio system based on current staffing/personnel scheduling of 911 Center would be seriously shortsighted. They might even want to consider an outside-the-box solution like linking up with other 911 Centers electronically to allow the other Center(s) to help expand our local capabilities during large incidents (i.e. a "virtual" dispatch console located "somewhere" outside Onondaga County). Our Center could similarly return the favor when other Centers get busy. Much is possible in this electronic, high speed communications era.

As we have seen recently in the news, the Public is expecting us to be prepared for anything that comes our way. We should probably all learn from the recent New Orleans experience that conventional thinking by well trained, traditional folks, may not be enough to satisfy the need. The Public and the News Media have very high expectations in this Post-9/11 world.

Some of the features we asked for in our County Fire Functional Requirements, do not appear to be addressed in this first Talk Group Plan. Here is a partial list of missing features:

- Ability to communicate with out-of-county units operating at an Onondaga County incident; or if Onondaga County unit is operating out-of-county (Func. Req. 3.0)

- Ability to handle 5 major incidents with 6 talk groups per incident (Func. Req. 5.0; Func. Req. 23.0) [It should be noted that Oswego County presently has 9 "fireground" talk groups and they occasionally run out of talk groups, so they must share a talk group on more than one incident. (Func. Req. 59.0)].

- Ability to record all talk groups for later playback (Func. Req. 9.0)

- Crossbanding to "old" system during transition period (Func. Req. 15.0)
- Crossbanding to individual departments' Channel 4 during transition period (Func. Req. 16.0)
- Ability for Command Officers to communicate with other, non-fire agencies (Func. Req. 22.0)
- Talk groups for Fire Police (Func. Req. 59.0) [Have the needs of the Fire Police been quantified?]
- Ability to communicate on National Mutual Aid Channels to support operations with out-of-town units operating in Onondaga County (Func. Req. 69.0)
- Ability for SAR units to communicate with other units operating on their VHF High Band frequency (Func. Req. 82.0)
- Ability to communicate with US Coast Guard on Oneida Lake (Func. Req. 84.0)
- Ability to meet needs of Onondaga County Underwater Recovery Team (Func. Req. 85.0)
- Comments related to the requested Functional Requirements of the EMS community are not address here. I'm assuming the EMS community will provide appropriate feedback to the OCICS Technical Committee.

Additionally, may want to consider the following:

- A private talk group for each fire department to use to conduct non-emergency communications within their own department. These talk groups could be assigned a lower voting priority. Departments using the Bush Electronics 800 MHz trunked system have become accustomed to this feature.
- A private talk group for each fire departments' Fire Chiefs to use to conduct private, non-emergency communications within their own department. These talk groups could be assigned a lower voting priority. Departments using the Bush Electronics 800 MHz trunked system have become accustomed to this feature.
- Including a number of back-up, redundant, self-contained receiver/transmitter/antenna/power supply systems to be stored in a safe area available for quick deployment after a major storm or terrorist action which renders the radio system infrastructure inoperable.
- The Talk Group Plan should clearly indicate which talk groups will be recorded, and which will not.

The above comments are provided with the intent to help make the new system as useful as possible. Please consider them as constructive input, and in no way a criticism of the good work done by others.

Please feel free to contact me if you have any questions or concerns.

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